

# PPI Program Spotlight

U.S. Department of Labor  
Bureau of Labor Statistics



## Quality Adjustment for Changes to Gasoline Resulting from the Reformulated Gasoline Program, Phase 2

Congress enacted major amendments to the Clean Air Act in 1990 (CAA90). Included in the provisions of CAA90 was the reformulated motor gasoline (RFG) program, that required reductions in automobile emissions in those areas of the country in which the Environmental Protection Agency (EPA) determined that air pollution was most severe. Phase 2 of the RFG program (RFG2) requires stricter summertime emission standards beginning May 1, 2000. Because this cleaner burning gasoline represents a quality improvement, it is appropriate to apply a quality adjustment to ensure that the Producer Price Index (PPI) for motor gasoline is tracking only pure price changes and is not biased by the new quality change.

Gasoline prices collected by the PPI program are national averages. According to the Energy Information Administration (EIA), 32.6 percent of all motor gasoline sold throughout the year in the United States is reformulated gasoline.<sup>1</sup> Of this amount, 11.0 percent goes to the California market, where State standards that are even more stringent than the RFG2 standards have been in effect since April of 1996. At the time those standards were imposed, a quality adjustment was applied to the California market portion of the gasoline PPI sample.<sup>2</sup> Therefore, a quality adjustment for RFG2 need be considered for only the 21.6 percent of the total gasoline market that is accounted for by RFG2-affected areas outside of California.

The standard PPI method for assigning a value to a quality adjustment is to equate the value with the difference in production costs associated with the quality change. However, the gasoline producers that participate in the PPI program were either unwilling or unable to provide this cost information. It was therefore necessary to rely on secondary sources. The most rigorous RFG2 cost analysis available was a report issued by the EIA,<sup>3</sup> which estimated the summer cost increase of producing RFG2 at \$0.01 per gallon in the southern States and \$0.015 per gallon in the northern States.

According to EIA gasoline volume statistics, 36.6 percent of RFG2 is sold in the southern States (as designated by the EPA), excluding California; and 63.4 percent is sold in the northern States.<sup>4</sup> The weighted na-

tional average for the additional cost of producing RFG2 is therefore equal to \$0.01317 per gallon, making the value of the quality adjustment equal to \$0.0028 per gallon for the industry as a whole (\$0.01317 X 0.216). This quality adjustment will be applied to all grades of motor gasoline.

RFG2 standards took effect in January 2000. However, refineries have already been meeting the RFG2 winter requirements for several years. It is only during the summer months (from May 1 through September 15) that refineries need to supply a cleaner burning fuel. Because it takes time to transport gasoline from the refineries to the terminals, most of the gasoline produced by the PPI pricing date for April already satisfied the summer RFG2 requirements. Similarly, most of the gasoline produced after the August pricing date will no longer need to meet these requirements. Therefore, the quality adjustment will be applied only from April through August of each year, beginning with data for April 2000. The specific industries for which data will be adjusted are listed below:

SIC Code	PPI Code	Title
2911-13	05-71	Finished motor gasoline
2911-133	05-71-03	Premium
2911-1331	05-71-03-02	Sales to jobbers, retailers and other sellers
2911-1332	05-71-03-03	Direct sales to end users
2911-134	05-71-04	Unleaded regular
2911-1341	05-71-04-02	Sales to jobbers, retailers and other sellers
2911-1342	05-71-04-03	Direct sales to end users
2911-135	05-71-05	Mid-premium unleaded
2911-1351	05-71-05-02	Sales to jobbers, retailers and other resellers
2911-1352	05-71-05-03	Direct sales to end users

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<sup>1</sup> Preliminary Petroleum Marketing Annual 1999, (Washington, U.S. Department of Energy, Energy Information Administration, July 13, 2000), p.314.

<sup>2</sup> PPI Detailed Report, April 1996, p.4.

<sup>3</sup> Lidderdale, Tancred and Bohn, Aileen, *Demand and Price*

*Outlook for Phase 2 Reformulated Gasoline* (Washington, U.S. Department of Energy, Energy Information Administration, July 13, 2000).

<sup>4</sup> Preliminary Petroleum Marketing Annual 1999, pp. 315-43.